

## FIELD EXPERIMENT HISTORY

**Title:** The Response of Bt-CRW Hybrids to Nitrogen Rate  
**Experiment:** 12NxBt-CR **Trial ID:** 3199 **Year:** 2008  
**Personnel:** J. G. Lauer, K. D. Kohn and T. H. Diallo  
**Location:** Arlington **County:** Columbia  
**Supported By:** Wisconsin Fertilizer Council

### Site Information

**Field:** ARS 330A **Previous Crop:** Corn **Soil Type:** Plano Silt Loam  
**Soil Test:** **Date:** 5 /9 /08 **pH:** 7.1 **OM (%) :** 4.1 **P (ppm) :** 107 **K (ppm) :** 347

### Plot Management

**Tillage Operations:** Chisel Plow Soil Finisher Cultivate 6/23/08  
**Fertilizer:** **Preplant Analysis** N/A **Rate lbs/A:** N/A **Date:** N/A  
**Starter Analysis** 10-34-0 **Rate lbs/A:** 3.0 gal/ **Date:** 5 /5 /08  
**Post plant Analysis** 34-0-0 **Rate lbs/A:** see Factors **Date:** 5 /16/08  
**Manure:** N/A **Rate lbs/A:** N/A **Date:** N/A  
**Herbicide:** Callisto 5 oz/A **Insecticide:** Force 3G 4.4 lbs/A  
 Surpass EC 2.5 pt/A  
 Accent 0.67 oz/A  
**Irrigation:** None  
**Planting Date:** 5/5/08 **Planting Depth:** 1.5" **Row Width** 30"  
**Target Plant Density:** 30500 plants per acre **Planting Method:** Almaco Precision Planter  
**Harvest Date:** 11/11/08 **Harvest Method:** Massey Ferguson 8XP-Soils

### Experimental Design

**Design:** RCB **Replications:** 4  
**Plot Size Seeded:** 10' x 25' **Experiment Size:** 1.44 Acre  
**Harvest Plot Size:** 5' x 20' **Harvest Plant Density:** N/A plants per acre

#### **Factors/Treatments:**

##### Nitrogen rate (lbs N/A)

1- 0  
 2- 40  
 3- 80  
 4- 120  
 5- 160  
 6- 200

##### Hybrids

1- Bt-CR1: Pioneer 35F44  
 2- Isoline1: Pioneer 35F37  
 3- Bt-CR2: Dekalb DKC52-59  
 4- Isoline2: Dekalb DKC52-62  
 5- Standart Bt-CB: NK Brand N58-D1  
 6- Standart nontransgenic: Pioneer 34A30  
 7- Bt-CR (Mon863) 1: Renk 698RRYGRW  
 8- Bt-CR (Mon863) 2: Dairyland ST400

**Table C- 50. The Response of Bt-CRW Hybrids to Nitrogen Rates.  
Arlington, WI - 2008.**

Hybrid	Nitrogen rate	Grain										Whole Plant														
		Yield		Moisture %	Test weight	Grower return	Grain Composition			Ethanol		Nitrogen Uptake				Minerals (% of DM)				Dry Matter Crude					Milk per	
		bu/A	lbs/A				Oil %	Starch %	Protein %	per A	per bu	Grain lb/a	Stover lb/a	Cob lb/a	Total lb/a	P %	Ca %	K %	Mg %	tons/A	yield %	protein %	ADF %	NDF %	NDFD %	Starch %
	0	158	19.1	53	540	2.9	59.7	6.5	2.93	463	81.2	51.7	6.4	139.3	0.20	0.38	0.83	0.20	8.1	5.3	23.7	47.2	64.5	31.1	3318	26962
	40	187	18.6	54	640	2.8	59.4	6.6	2.94	550	99.6	61.7	7.7	169.1	0.21	0.38	0.86	0.20	9.4	5.5	23.5	47.2	63.8	31.6	3292	30945
	80	210	18.0	54	721	2.7	59.0	6.8	2.93	615	118.5	63.9	8.8	191.1	0.21	0.38	0.90	0.21	9.9	5.7	24.3	48.7	63.3	30.5	3249	32136
	120	227	17.3	54	781	2.7	59.2	6.9	2.92	662	133.3	70.2	9.8	213.3	0.22	0.39	0.90	0.21	10.6	6.0	24.5	49.7	62.4	30.1	3199	34015
	160	231	17.7	54	793	2.7	58.5	7.1	2.92	674	140.5	77.1	10.4	228.0	0.23	0.39	1.01	0.21	10.8	6.4	24.4	49.3	61.9	30.2	3176	34315
	200	233	17.7	54	801	2.8	58.4	7.3	2.91	679	151.6	88.9	11.5	252.1	0.24	0.39	1.07	0.21	11.0	6.8	25.0	50.5	61.5	28.7	3136	34432
Dairyland ST400		207	17.9	53	710	2.5	58.9	7.0	2.94	607	126.2	64.5	9.2	199.9	0.22	0.38	0.99	0.21	9.8	5.8	25.1	49.2	62.4	30.6	3181	31019
Dekalb DKC52-59		224	16.2	52	776	2.9	59.2	6.8	2.92	654	124.9	71.7	9.4	206.1	0.22	0.39	0.90	0.21	10.5	5.9	23.6	47.5	62.5	32.2	3206	33603
Dekalb DKC52-62		207	16.2	52	719	2.9	59.3	6.5	2.94	609	115.9	65.7	8.7	190.3	0.21	0.41	0.81	0.22	9.7	5.7	23.8	48.3	62.9	31.3	3230	31171
NK Brand N58-D1		194	18.5	54	662	2.6	59.5	6.8	2.92	566	108.6	67.9	8.5	185.0	0.21	0.39	0.78	0.21	9.6	5.8	24.6	49.7	63.1	29.3	3219	30853
Pioneer 34A30		209	20.7	56	705	2.8	59.1	6.8	2.93	611	122.1	74.5	9.4	206.1	0.23	0.37	1.06	0.20	10.5	6.3	24.2	49.1	63.4	29.1	3250	34224
Pioneer 35F37		211	19.3	56	720	2.8	58.8	6.9	2.92	617	123.4	72.1	9.4	204.8	0.22	0.38	0.97	0.20	10.1	6.0	24.3	49.0	63.0	30.0	3245	32784
Pioneer 35F44		204	19.3	55	696	2.9	58.7	7.0	2.92	596	125.0	71.0	9.4	205.4	0.23	0.37	1.00	0.20	9.8	6.5	23.7	48.2	62.5	30.0	3250	31669
Renk 698RRYGRW		206	16.6	53	711	2.9	58.7	7.1	2.90	598	120.0	64.1	8.8	193.0	0.22	0.39	0.92	0.21	9.8	5.7	24.6	49.1	63.3	30.4	3246	31752
Dairyland ST400	0	152	18.7	52	519	2.7	59.2	7.1	2.94	446	79.5	42.1	5.8	127.4	0.21	0.38	0.80	0.20	7.4	5.3	23.2	46.4	63.6	33.1	3295	24339
Dairyland ST400	40	186	18.5	53	637	2.3	58.9	7.3	2.96	552	106.5	63.2	8.1	177.8	0.20	0.38	0.89	0.21	9.5	5.0	25.8	49.6	62.2	30.8	3163	29853
Dairyland ST400	80	214	17.8	54	735	2.5	59.3	6.6	2.94	628	125.7	63.4	9.1	198.1	0.23	0.38	0.92	0.21	10.1	5.8	23.4	47.2	62.6	32.7	3222	32292
Dairyland ST400	120	221	16.9	54	763	2.3	59.4	6.9	2.95	653	136.6	58.4	9.4	204.4	0.23	0.38	0.93	0.21	10.0	6.0	23.4	47.7	62.9	32.4	3249	32424
Dairyland ST400	160	235	17.3	53	808	2.8	59.3	6.8	2.93	688	148.0	70.9	10.5	229.5	0.22	0.38	1.15	0.22	10.6	6.2	26.9	51.3	61.8	28.4	3120	33348
Dairyland ST400	200	233	18.2	54	799	2.6	57.6	7.6	2.90	677	161.1	88.7	12.0	261.9	0.23	0.38	1.28	0.21	11.1	6.4	27.9	53.2	61.1	26.0	3035	33861
Dekalb DKC52-59	0	175	16.6	50	604	3.0	60.0	6.1	2.91	510	85.7	59.1	6.9	151.7	0.18	0.39	0.69	0.20	9.0	4.9	21.9	43.8	64.6	35.5	3349	30439
Dekalb DKC52-59	40	202	17.0	52	696	3.0	59.7	6.0	2.94	593	98.0	62.2	7.7	168.0	0.21	0.36	0.92	0.20	9.6	5.7	23.4	46.4	63.2	32.2	3252	31505
Dekalb DKC52-59	80	221	15.9	52	766	2.5	59.3	6.7	2.92	646	119.2	63.1	8.8	191.1	0.21	0.38	0.82	0.21	10.0	5.6	24.0	47.8	62.7	32.8	3211	32398
Dekalb DKC52-59	120	248	16.1	52	860	3.0	59.5	6.9	2.92	725	144.0	73.6	10.4	228.1	0.23	0.40	0.93	0.22	11.2	6.1	24.8	49.7	61.6	30.3	3131	34942
Dekalb DKC52-59	160	247	16.1	53	854	2.4	58.4	7.2	2.93	721	149.3	82.8	11.1	243.3	0.23	0.40	1.10	0.22	11.2	6.4	25.1	50.0	61.9	29.0	3137	35112
Dekalb DKC52-59	200	252	15.4	52	875	3.2	58.2	7.7	2.90	730	153.4	89.6	11.7	254.6	0.24	0.41	0.92	0.22	11.8	6.6	22.6	47.6	61.3	33.5	3158	37223
Dekalb DKC52-62	0	167	16.7	51	578	3.2	60.3	6.0	2.94	492	85.8	44.8	6.3	137.0	0.19	0.40	0.75	0.21	7.7	5.0	24.1	48.0	63.1	31.3	3219	25002
Dekalb DKC52-62	40	189	16.5	52	655	3.1	59.7	6.1	2.97	562	95.0	61.9	7.5	164.5	0.20	0.39	0.83	0.21	9.5	5.3	22.3	44.9	63.9	34.2	3302	31513
Dekalb DKC52-62	80	213	16.3	52	737	2.8	58.9	6.7	2.92	621	111.6	64.4	8.4	184.4	0.20	0.43	0.83	0.22	9.9	5.5	24.6	49.4	64.0	29.0	3262	32363
Dekalb DKC52-62	120	218	16.1	53	755	3.0	59.4	6.5	2.93	638	120.9	60.2	8.7	189.7	0.21	0.39	0.70	0.21	9.7	5.4	22.9	47.3	62.9	33.3	3263	31694
Dekalb DKC52-62	160	235	16.0	53	817	2.7	58.5	7.0	2.92	688	145.8	78.8	10.8	235.4	0.23	0.41	0.96	0.22	10.7	6.2	24.6	50.1	61.8	30.2	3156	33680
Dekalb DKC52-62	200	222	15.7	53	771	2.7	59.2	6.8	2.94	654	136.4	84.1	10.6	231.0	0.23	0.44	0.79	0.23	10.3	6.5	24.0	50.2	61.9	30.0	3176	32776
NK Brand N58-D1	0	142	19.4	53	484	2.8	60.3	6.4	2.93	417	66.9	57.7	6.0	130.5	0.18	0.37	0.74	0.20	7.8	5.1	25.3	49.8	65.9	26.8	3312	25981
NK Brand N58-D1	40	185	19.2	54	631	2.4	59.7	6.5	2.92	541	98.6	60.7	7.6	167.0	0.20	0.39	0.72	0.20	9.6	5.3	23.8	48.2	64.0	30.7	3287	31618
NK Brand N58-D1	80	198	18.7	54	678	2.5	58.5	7.1	2.91	577	108.5	59.2	8.1	175.8	0.21	0.37	0.76	0.21	9.4	5.5	24.3	49.0	62.8	30.8	3224	30187
NK Brand N58-D1	120	209	17.8	55	719	2.4	60.3	6.3	2.91	610	118.6	74.9	9.3	202.9	0.21	0.40	0.68	0.21	10.2	5.8	25.3	51.5	62.8	29.2	3184	32580
NK Brand N58-D1	160	210	17.7	55	722	2.6	59.3	7.0	2.93	616	120.7	71.4	9.2	201.3	0.22	0.42	0.80	0.21	10.2	6.0	24.4	49.5	61.8	30.1	3168	32259
NK Brand N58-D1	200	216	18.0	55	741	2.9	58.8	7.3	2.93	632	138.4	83.2	10.6	232.3	0.24	0.40	0.99	0.22	10.4	7.0	24.6	50.3	61.5	28.1	3138	32495

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